

CLAIMS

What is claimed is:

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An antineoplastic dendritic polymer conjugate, comprising:

a dendritic polymer conjugated to an antineoplastic agent.

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The antineoplastic dendritic polymer conjugate of claim 1, wherein the dendritic polymer is conjugated to cisplatin, carboplatin, oxaliplatin, tetraplatin, platinum-DACH, ormaplatin, titanocene dichloride, vanadocene dichloride, niobocene dichloride, molybdenocene dichloride, rhenocene dichloride, diorganotin dihalides or other metallocene dihalides as the antineoplastic agent.

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The antineoplastic dendritic polymer conjugate of claim 1, wherein the dendritic polymer is conjugated to a platin-based analogue as the antineoplastic agent. .

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The antineoplastic dendritic polymer conjugate of claim 3, wherein the platin-based analogue is cisplatin or carboplatin.

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The antineoplastic dendritic polymer conjugate of claim 4, wherein the platin-based analogue is encapsulated within the dendritic polymer.

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The antineoplastic dendritic polymer conjugate of claim 2, wherein the antineoplastic dendritic polymer conjugate has a therapeutic effect on malignant tumors.

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The antineoplastic dendritic polymer conjugate of claim 1 or 3, wherein the dendritic polymer is a dendrimer.

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The antineoplastic dendritic polymer conjugate of claim 7, wherein the dendritic polymer includes anionic terminal functional groups.

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The antineoplastic dendritic polymer conjugate of claim 8, wherein the anionic terminal functional groups are carboxylate functional groups.

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The antineoplastic dendritic polymer conjugate of claim 7, wherein the dendrimer is a poly(amidoamine) dendrimer having carboxylate functional groups.

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The antineoplastic dendritic polymer conjugate of claim 7, wherein the dendritic polymer is a poly(propyleneimine) having carboxylate functional groups.

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The antineoplastic dendritic polymer conjugate of claim 10 wherein the dendritic polymer is acrylate derived.

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The antineoplastic dendritic polymer conjugate of claim 11 where the conjugate is an aggregates of poly(amidoamine) dendrimers of generation 3.5, ethylenediamine core, as aggregates with cisplatin or carboplatin.

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The antineoplastic dendritic polymer conjugate of claim 4, wherein the molar ratio of the cisplatin as the antineoplastic agent to dendritic polymer in the conjugate is from about 100:1 to about 1:1.

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The antineoplastic dendritic polymer conjugate of claim 13, wherein the molar ratio of cisplatin to dendritic polymer in the conjugate is about 35:1.

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The antineoplastic dendritic polymer conjugate of claim 3, wherein the percent by weight of platinum as the metal in the antineoplastic agent in the conjugate is from 1% to 40%.

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The antineoplastic dendritic polymer conjugate of claim 15, wherein the percent by weight of platinum in the conjugate is from 15% to 25%.

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The antineoplastic dendritic polymer conjugate of claim 3, wherein the platin-based analogue comprises a central tetravalent platinum atom bonded to the nitrogen atoms of two amine ligands, which may be the same or different, the amine ligands being in *cis* confirmation with respect to each other and at least one of the remaining ligand sites is coupled to the dendritic polymer.

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The antineoplastic dendritic polymer conjugate of claim 18, wherein platin-based analogue is cisplatin or carboplatin.

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